FY2013

JOLIET AAP

Installation Action Plan

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Statement of Purpose

The purpose of the Installation Action Plan (IAP) is to outline the total multiyear cleanup program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern (AOC), and proposes a comprehensive, installation-wide approach, along with the costs and schedules associated with conducting investigations and taking the necessary remedial actions (RA).

In an effort to coordinate planning information between the US Army Environmental Command (USAEC), the Joliet Army Ammunition Plant (JOAAP), the Base Realignment and Closure (BRAC) Division, the executing agencies, regulatory agencies, and the public, an IAP was completed. The IAP is used to track requirements, schedules, and budgets for all major Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

Acronyms

- AEDB-R Army Environmental Database Restoration
 - AOC Area of concern
 - BRAC Base Realignment and Closure
 - **CA Corrective Action**
- CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980
 - CTT Closed, Transferring, and Transferred
 - cy cubic yard
 - **DD** Decision Document
 - **DERP Defense Environmental Restoration Program**
 - **DNT** Dinitrotoluene
 - EE/CA Engineering Evaluation/Cost Analysis
 - ER,A Environmental Restoration, Army
 - FFA Federal Facilities Agreement
 - FRA Final Remedial Action
 - FS Feasibility Study
 - FY Fiscal Year
 - **GMZ** Groundwater Management Zone
 - HRS Hazard Ranking System
 - HTRW Hazardous, Toxic, and Radiological Waste
 - IAP Installation Action Plan
 - IC Institutional Control
 - **ID** Identification
 - IEPA Illinois Environmental Protection Agency
 - IL Illinois
 - IR Installation Restoration
 - IRA Interim Remedial Action
 - IRP Installation Restoration Program
 - JAAP Joliet Army Ammunition Plant (AEDB-R designation)
 - JADA Joliet Arsenal Development Authority
- JOAAP Joliet Army Ammunition Plant
 - K thousand
 - LAP Load, Assemble, and Pack
 - LTM Long-Term Management
 - LUC Land Use Controls
- MDAS Munitions Debris and Scap
- MEC Munitions and Explosives of Concern
- mm millimeter
- MMRP Military Munitions Response Program
- MNA Monitored Natural Attenuation
- MOA Memorandum of Agreement
- MPPEH Material Presenting Potential Explosive Hazard
 - MR Munitions Response
- MRSPP Military Response Site Prioritization Protocol
 - N/A Not Applicable
 - NCP National Oil & Hazardous Substances Pollution Contingency Plan

Acronyms

- NFA No Further Action
- NPL National Priorities List
- **OB Open Burning**
- **OD Open Detonation**
- ORSC Ordnance Removal and Site Characterization
 - OU Operable Unit
 - PA Preliminary Assessment
 - PBA Performance-Based Acquisition
 - PBC Performance-Based Contract
 - PCB Polychlorinated Biphenyl
 - **RA Remedial Action**
- RA(C) Remedial Action (Construction)
- **RAB Restoration Advisory Board**
 - RC Response Complete
- RCRA Resource Conservation and Recovery Act
 - RD Remedial Design
- RDX Cyclotrimethylenetrinitramine
- **RG** Remediation Goals
- RI Remedial Investigation
- RIP Remedy-in-Place
- **ROD** Record of Decision
- RRSE Relative Risk Site Evaluation
 - SI Site Inspection
- SRU Soil Remediation Unit
- SVOC Semi-Volatile Organic Compound
- TAPP Technical Assistance for Public Participation
- TBD To Be Determined
- Tetryl Trinitrophenylmethylnitramine
- TNT Trinitrotoluene
- TRC Technical Review Committee
- USACE US Army Corps of Engineers
- USAEC US Army Environmental Command
- USDA US Department of Agriculture
- USEPA US Environmental Protection Agency
 - UXO Unexploded Ordnance
 - VA Veterans' Affairs
 - VOC Volatile Organic Compound
- WCLF Will County Landfill

Installation Information

Installation Locale

Installation Size (Acreage): 23,544.00

City: Joliet County: Will State: Illinois

Other Locale Information

The JOAAP is located in northeastern Illinois, approximately 60 miles southwest of Chicago and 10 miles south of Joliet in Will County. Nearby communities include Channahon to the northwest, Elwood to the north, Manhattan to the northeast, Symerton to the southeast, and Wilmington to the south. The installation, which is divided by Illinois Route 53, once occupied a total of 23,544 acres (about 37 square miles). Approximately 1,068 acres are currently under US Army control.

Installation Mission

The JOAAP is a US Army-owned industrial facility that is currently excess property and is completely inactive. Following construction in the early-1940s, the eastern side of the plant was used to load, assemble, and pack (LAP) bombs, shells, mines, and supplementary charges, and the western side of the plant was equipped to produce explosives such as trinitrotoluene (TNT), dinitrotoluene (DNT), trinitrophenylmethylnitramine (tetryl), and constituent chemicals. No production has occurred since 1977. During periods of inactivity, many areas and facilities were leased out for commercial operations.

Lead Organization

Base Realignment and Closure Division

Lead Executing Agencies for Installation

USAEC - Investigation Phase

US Army Corps of Engineers (USACE), Louisville District - RA Phase

Regulator Participation

Federal US Environmental Protection Agency (USEPA), Region V

State Illinois Environmental Protection Agency (IEPA)

National Priorities List (NPL) Status

A score of 35.2 was recorded on 01-MAR-89.

Final RA(C) Completion Date: 201903

Date for NPL Deletion: TBD

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public

Participation (TAPP) Status RAB established 1995

Installation Program Summaries

IRP

Primary Contaminants of Concern: Explosives, Metals, Munitions and explosives of concern (MEC), Semi-

volatiles (SVOC), Volatiles (VOC)

Affected Media of Concern: Groundwater, Soil

Installation Information

MMRP

Primary Contaminants of Concern: Munitions and explosives of concern (MEC)

Affected Media of Concern: Soil

Cleanup Program Summary

Installation Historic Activity

The JOAAP was constructed in the early-1940s. It originally consisted of the Kankakee ordnance works and the Elwood ordnance plant and was located in southwestern Will County, Illinois. The installation originally encompassed approximately 36,000 acres that were divided by Illinois Route 53. Approximately 13,000 acres were excessed and disposed of in the early-1960s. The eastern side of the plant was used to LAP bombs, shells, mines, and supplementary charges, and was known as the LAP area. The western side of the plant was equipped to produce explosives such as TNT, DNT, tetryl, and constituent chemicals and was known as the manufacturing area.

In the past, production output at JOAAP varied as the demand for munitions fluctuated. The plant was used extensively during World War II. Production was reactivated in support of the conflicts in Korea and Vietnam. No production has occurred since 1977. During times of inactivity, many areas and facilities were leased out for commercial operations. The JOAAP is now a US Army-owned industrial facility that is excess property and is completely inactive.

In accordance with the Illinois Land Conservation Act of 1995, P.L. 104-106, Div. B, Title 2901-2932, Feb. 10, 1996, the US Army will transfer the remaining 23,544 acres of land at JOAAP to various federal, local, and state jurisdictions. In 1997, approximately 982 acres were transferred to the Department of Veterans' Affairs (VA) to establish a veterans' cemetery; in 2002 455 acres were transferred to Will County, Illinois to establish the Will County Landfill (WCLF). Approximately 19,100 acres will be transferred to the US Department of Agriculture (USDA) to establish the Midewin National Tallgrass Prairie. To date, 17,620 acres of the total have been conveyed to the USDA. Approximately 3,000 acres will be transferred to the state of Illinois to establish two industrial parks. To date, transference of 2,935 acres to the state of Illinois has been completed. A total of 22,767 acres (approximately 94 percent) have been disposed.

The second five-year review under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) was completed in 2009.

Installation Program Cleanup Progress

IRP

Prior Year Progress: Long-term management (LTM) continued in fiscal year (FY)13. A five-year review is underway.

Future Plan of Action: LTM will continue. This will be awarded under a new contract in FY14.

MMRP

Prior Year Progress: For site JAAP-001-R-02, the remedial investigation (RI) is underway. A contract to document

closure with land use controls (LUCs) will be awarded for JAAP-001-R-01, JAAP-002-R-01, and JAAP-004-R-01. The same contract will also cover removal of the L3 capped area under site JAAP-

001-R-03.

Future Plan of Action: LTM will continue for JAAP-001-R-01, JAAP-002-R-01, and JAAP-004-R-01. The RI for JAAP-

001-R-02 will continue into 2014. The feasibility study(FS)/DD for this site will be awarded in FY15.

Removal of the L3 capped area (JAAP-001-R-03) will continue until completion.

5-Year / Periodic Review Summary

5-Year / Periodic Review Summary

Status	Begin Date	End Date	End FY
Complete	200310	200406	2004
Complete	200810	200910	2010
Underway	201210	201409	2014

Last Completed 5-Year / Periodic Review Details

Associated ROD/DD Name	Sites
ROD (1998) for Joliet AAP	JAAP-001, JAAP-002, JAAP-003, JAAP-004, JAAP-
	005, JAAP-006, JAAP-007, JAAP-008, JAAP-009,
	JAAP-010, JAAP-011, JAAP-012, JAAP-013, JAAP-
	014, JAAP-015, JAAP-016, JAAP-017, JAAP-018,
	JAAP-0L1, JAAP-0L2, JAAP-0L3, JAAP-0L4, JAAP-
	0L5, JAAP-0L6, JAAP-0L7, JAAP-0L8, JAAP-0L9,
	JAAP-GWM, JAAP-L10, JAAP-L11, JAAP-L12, JAAP-
	L13, JAAP-L14, JAAP-L15, JAAP-L16, JAAP-L17,
	JAAP-L18, JAAP-L19, JAAP-L20, JAAP-L21, JAAP-
	L22, JAAP-L23, JAAP-L24, JAAP-L25, JAAP-L26,
	JAAP-L27, JAAP-L28, JAAP-L29, JAAP-L30, JAAP-
	L31, JAAP-L32, JAAP-L33, JAAP-L34, JAAP-L35

Results The final remedy for groundwater (monitored natural attenuation) is protective and is complying with the ROD. Exposure pathways are being controlled and ICs are preventing exposure to contaminated groundwater.

ActionsImprove maintenance of the monitoring network, provide better communications and better recordkeeping for verifying ICs on transferred property.

PlansRepair and maintain well pads, repair well casings, install new locks, sample monitoring well MW361R at Site M8 for sulfate, verify whether additional sampling is required at MW124, notify property owners of ICs and document this (2009-2010).

Recommendations and Implementation Plans:

This is the second five-year review report for the groundwater operable unit (OU) at Joliet AAP. The selected remedy for groundwater was monitored natural attenuation (MNA) and institutional controls (ICs) within designated groundwater management zones (GMZs). Compounds of concern include explosives, volatile organic compounds (VOC), sulfate and metals.

Current monitoring data indicate that the remedy is functioning as required and is expected to be protective of human health and the environment. Plumes are expected to remain within the GMZs. Long-term protectiveness of the RA will be verified by long-term monitoring.

Detailed issues, recommendations, and follow-up actions include the following:

- LTM contractor maintained well pads as needed since five-year review.
- LTM contractor repaired well casings at MW410, MW411, and MW159 and installed new locks at MW410, MW411, MW803 and MW805.
- LTM contractor sampled monitoring well MW361R at site M8 for sulfate.
- Additional sampling was completed as required at MW124 (site M7)
- Soil and groundwater OUs will be combined for the next five-year review.

Additional five-year review findings included the following:

Notify property owners in areas subject to ICs to ensure and document that they are aware of the environmental condition of property, ICs, and of the duties and obligations imposed by the memorandum of agreement (MOA). Owners should provide

5-Year / Periodic Review Summary

Recommendations and Implementation Plans: documentation to the Army to verify that they understand and comply with the ICs and deed restrictions placed on their property. This action is underway under JAAP-GWM.

Analyze metals. Groundwater at sites L2 and L3 had not been monitored for metals since 2003. Metals were added to the sampling in the subsequent semiannual sampling event.

Land Use Control (LUC) Summary

LUC title: EBA LUC
Site(s): JAAP-001-R-02

ROD/DD title: Expanded Buffer Area DD

Location of LUC

EBA around the L2-L3 OB/OD Area

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Restrict land use - No

daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: Signs

Types of Institutional Controls: Deed Notices, Deed Restrictions

Date in Place: 201810

Modification Date: N/A

Date Terminated: N/A

Inspecting Organization: Other Federal Agency

Record of LUC: ECOP (Fed to Fed)

Documentation Date: 201810

LUC Enforcement: Annual Inspections, 5 Year Reviews, Transferee Reporting

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

LUC title: L2-L3 Buffer MR LUCs

Site(s): JAAP-001-R-01, JAAP-002-R-01

ROD/DD title: DD for 001R01, 002R01, and 004R01

Location of LUC

L2 and L3 original buffer area

Land Use Restriction: Media specific restriction - Prohibit, or otherwise manage excavation, Media specific restriction -

Prohibit, or otherwise manage excavation below a specified depth, Restrict land use - No

daycare/hospital/school use, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Deed Restrictions, Restrictions on land use

Date in Place: 201610 **Modification Date:** N/A **Date Terminated:** N/A

Inspecting Organization: Other Federal Agency

Record of LUC: ECOP (Fed to Fed)

Documentation Date: 201612

LUC Enforcement: Annual Inspections, 5 Year Reviews, Transferee Reporting

Contaminants: Unexploded Ordnance(UXO)

Additional Information

N/A

LUC title: Land and GW Restriction

Land Use Control (LUC) Summary

Site(s): JAAP-001, JAAP-002, JAAP-003, JAAP-004, JAAP-005, JAAP-006, JAAP-007, JAAP-008, JAAP-009, JAAP-010, JAAP-011, JAAP-012, JAAP-013, JAAP-014, JAAP-015, JAAP-016, JAAP-017, JAAP-018, JAAP-0L1, JAAP-0L2, JAAP-0L3, JAAP-0L4, JAAP-0L5, JAAP-0L6, JAAP-0L7, JAAP-0L8, JAAP-0L9, JAAP-GWM, JAAP-L10, JAAP-L11, JAAP-L12, JAAP-L13, JAAP-L14, JAAP-L15, JAAP-L16, JAAP-L17, JAAP-L18, JAAP-L19, JAAP-L20, JAAP-L21, JAAP-L22, JAAP-L23, JAAP-L24, JAAP-L25, JAAP-L26, JAAP-L27, JAAP-L28, JAAP-L29, JAAP-L30, JAAP-L33, JAAP-L34, JAAP-L35

ROD/DD title: ROD (1998) for Joliet AAP

Location of LUC

Entire former installation for land re-use. Within ROD-defined Groundwater Management Zones for GW.

Land Use Restriction: Media specific restriction - Prohibit groundwater extraction that interferes with Remedial Action system,

Media specific restriction - prohibit use of groundwater for consumption or domestic purposes, Media specific restriction - restrict drinking water well installation, Media specific restriction - restrict withdrawal

or use of groundwater w/out treatment, Restrict land use - No residential use

Types of Engineering Controls: None

Types of Institutional Controls: Affirmative covenants, Deed Notices, Deed Restrictions, Fed to Fed Transfer Agreement,

Restrictions on land use

Date in Place: 199810 **Modification Date:** N/A **Date Terminated:** N/A

Inspecting Organization: Installation
Record of LUC: ECOP (Fed to Fed)

Documentation Date: 199810

LUC Enforcement: Annual Inspections, 5 Year Reviews, Transferee Reporting

Contaminants: METALS, NITROAROMATICS, ORGANICS

Additional Information

N/A

Summary of Parcel Prioritization and Transfer Strategy

Parcel Name: JADA 8
Parcel Size: 19.00

Associated Sites: JAAP-013 Transfer Date: 201009 Current Land Use: N/A Future Land Use: N/A Encumbrances: N/A

Leases/Permits/Licenses: N/A
Transfer Strategy: Special Legislation

Recipient Organization: State of Illinois (JADA)

Other Issues Affecting Transfer: N/A

Parcel Name: USDA 7
Parcel Size: 442.00

Associated Sites: JAAP-GWM

Transfer Date: 200909 Current Land Use: N/A Future Land Use: N/A Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Forest service

Other Issues Affecting Transfer: N/A

Parcel Name: USDA 8
Parcel Size: 423.00

Associated Sites: JAAP-GWM, PBC at Joliet, JAAP-011, JAAP-0L3

Transfer Date: 201009 Current Land Use: N/A Future Land Use: N/A Encumbrances: N/A

Leases/Permits/Licenses: N/A

Transfer Strategy: Transfer to Other Federal Agencies

Recipient Organization: USDA Forest Service

Other Issues Affecting Transfer: N/A

JOLIET AAP

Non-BRAC Excess Installation Restoration Program

IRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 55/50

Installation Site Types with Future and/or Underway Phases

- 2 Contaminated Ground Water
 - (JAAP-GWM, PBC at Joliet)
- 3 Landfill

(JAAP-011, JAAP-013, JAAP-0L3)

Most Widespread Contaminants of Concern

Explosives, Metals, Munitions and explosives of concern (MEC), Semi-volatiles (SVOC), Volatiles (VOC)

Media of Concern

Groundwater, Soil

•	•		ns / Final Remedial Actions (IRA/FRA)) Remedy	FY	Cost
Site ID	Site Name	Action	•		
JAAP-001	SOUTHERN ASH PILE	IRA	CAPPING	1994	TBD
JAAP-007	M7 - RED WATER AREA SOUTH OF TNT DITCH	IRA	CAPPING	1994	TBD
JAAP-009	NORTHERN ASH PILE	IRA	CAPPING	1994	TBD
JAAP-011	M11 LANDFILL	IRA	CAPPING	1994	TBD
JAAP-L21	SANITARY LANDFILL	IRA	CAPPING	1994	TBD
JAAP-008	ACID MANUFACTURING AREA	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1996	TBD
JAAP-001	SOUTHERN ASH PILE	IRA	CAPPING	1997	TBD
JAAP-006	M6 TNT DITCH COMPLEX	IRA	WASTE REMOVAL - DRUMS, TANKS, BULK CONTAINERS	1997	TBD
JAAP-0L2	EXPLOSIVE BURNING GROUND	IRA	WASTE REMOVAL - SOILS	1997	TBD
JAAP-0L3	DEMO AREA	IRA	FENCE OR OTHER SITE ACCESS CONTROL MEASURES	1997	TBD
JAAP-0L6	GROUP 70 - MOTOR POOL	FRA	WASTE REMOVAL - SOILS	1998	TBD
JAAP-005	M5 - TETRYL PRODUCTION AREA	FRA	WASTE REMOVAL - SOILS	1999	TBD
JAAP-008	ACID MANUFACTURING AREA	FRA	BIOREMEDIATION - IN SITU GROUNDWATER	1999	TBD
JAAP-010	TOLUENE TANK FARMS (3)	FRA	NATURAL ATTENUATION	1999	TBD
JAAP-0L1	GROUP 61 TNT - RIDGE & FURROW SYSTEM	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-0L7	GROUP 1	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-0L8	GROUP 2	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-0L9	GROUP 3	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-GWM	INSTALLATION-WIDE LTM	FRA	NATURAL ATTENUATION	2000	TBD
JAAP-L10	GROUP 3A	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-L11	TEST SITE	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-L17	GROUP 7	FRA	WASTE REMOVAL - SOILS	2000	TBD
JAAP-007	M7 - RED WATER AREA SOUTH OF TNT DITCH	FRA	WASTE REMOVAL - SOILS	2002	TBD
JAAP-L16	GROUP 6	FRA	WASTE REMOVAL - SOILS	2003	TBD
JAAP-006	M6 TNT DITCH COMPLEX	FRA	WASTE REMOVAL - SOILS	2005	TBD
JAAP-0L1	GROUP 61 TNT - RIDGE & FURROW SYSTEM	FRA	WASTE REMOVAL - SOILS	2006	TBD
JAAP-0L7	GROUP 1	FRA	WASTE REMOVAL - SOILS	2006	TBD
JAAP-0L8	GROUP 2	FRA	WASTE REMOVAL - SOILS	2006	TBD

IRP Summary

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))					
Site ID	Site Name	Action	Remedy	FY	Cost
JAAP-0L9	GROUP 3	FRA	WASTE REMOVAL - SOILS	2006	TBD
JAAP-L10	GROUP 3A	FRA	WASTE REMOVAL - SOILS	2006	TBD
JAAP-L14	GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER	FRA	WASTE REMOVAL - SOILS	2006	TBD
JAAP-001	SOUTHERN ASH PILE	FRA	CAPPING	2007	TBD
JAAP-001	SOUTHERN ASH PILE	FRA	WASTE REMOVAL - SOLIDS (NON- SOILS)	2007	TBD
JAAP-003	FLASHING GROUNDS	FRA	WASTE REMOVAL - SOILS	2007	TBD
JAAP-004	LEAD AZIDE AREA	FRA	WASTE REMOVAL - SOILS	2007	TBD
JAAP-004	LEAD AZIDE AREA	FRA	BIOREMEDIATION	2007	TBD
JAAP-009	NORTHERN ASH PILE	FRA	REMOVAL	2007	TBD
JAAP-009	NORTHERN ASH PILE	FRA	DRAINAGE CONTROLS	2007	TBD
JAAP-0L3	DEMO AREA	IRA	WASTE REMOVAL - SOILS	2008	TBD
JAAP-0L3	DEMO AREA	FRA	CAPPING	2008	TBD
PBC at Joliet	PBC	FRA	OTHER	2010	TBD

Duration of IRP

Year of IRP Inception: 198711

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201003/201003

Date of IRP completion including Long Term Management (LTM): 204309

IRP Contamination Assessment

Contamination Assessment Overview

The main concerns of the Installation Restoration Program (IRP) have been contamination of soils and groundwater by explosives and metals. There has been no migration of contamination off-post.

Contaminants at the installation include waste products from the production of sulfuric and nitric acids, sodium sulfite, TNT, DNT, tetryl, cyclotrimethylenetrinitramine (RDX), metals, VOCs, SVOCs, and polychlorinated biphenyls (PCB).

The goal of the overall cleanup activities at JOAAP is to eliminate or reduce the levels of contaminants to concentrations that are protective to human health and the environment, such that unacceptable health effects or ecological impacts will not result from future uses of the JOAAP property.

The JOAAP IRP began at the time of the installation assessment in 1978 when a records search was conducted to identify past contamination and to assess the potential for contaminant migration, if any, beyond the installation boundary.

In July 1987 the manufacturing area was placed on the National Priorities List (NPL) with a hazard ranking score (HRS) of 32.08. In March 1989 the LAP area was placed on the NPL with an HRS of 35.23. In June 1989 the US Army, the USEPA Region V, and the IEPA signed a federal facility agreement (FFA).

Of the 53 sites originally identified for study in the early investigations, 27 were recommended for RA in the FS completed in late-1997. The other 26 were found to meet the requirements that allowed them to be recommended for no further action (NFA). Currently, three sites have RIP with LTM, and 24 sites are RC.

In November 1998 the record of decision (ROD) was finalized, with the exception of certain soil issues on USDA land. The ROD specifies RAs such as bioremediation, waste removal, source removal, and capping for contaminated soils. The ROD specified natural attenuation with ICs for groundwater because some contaminant concentrations exceed safe levels, specifically at sites JAAP-001, JAAP-003, JAAP-005, JAAP-006, JAAP-007, JAAP-008, JAAP-011, JAAP-012, JAAP-013, and JAAP-114.

In 1998, based upon concerns raised by USDA and other stakeholders, the US Army, the USEPA, and the IEPA agreed to reevaluate the risk to human and ecological receptors. In 1999 multi-agency work groups were formed to evaluate these risks, and in 2000 they recommended preliminary remediation goals. These goals were evaluated by a multi-agency management group.

Appropriate final remedial actions (FRA) for USDA soils were developed, evaluated, and selected in accordance with the national oil and hazardous substances pollution contingency plan (NCP). A 2004 final ROD addresses the interim USDA soil component. All other decisions within this document are considered final.

Since finalizing the 2004 ROD, the following sites have reached RIP/RC for prairie use: JAAP-0L1, JAAP-0L2, JAAP-0L5, JAAP-0L7, JAAP-0L8, JAAP-0L9, JAAP-L10, JAAP-L14, JAAP-L23A, JAAP-M02, JAAP-M03, JAAP-M04, JAAP-M12.

Cleanup Exit Strategy

LTM and five-year reviews will continue at sites where required. LTM optimization and ramp-down will occur where practical.

IRP Previous Studies

	Title	Author	Date
1978			
	Installation Assessment	Office of the Project Manager for Chemical Demilitarization and Installation Restoration	SEP-1978
1982			
	Installation Restoration Survey	Donohue and Associates	NOV-1982
1983			
	JAAP Phase II Technical Report: TNT Ditch Complex, Red Water Area, Explosive Burning Grounds, Group 61	Donohue and Associates	AUG-1983
	JAAP Phase II: Technical Report, Excessing Parcels	Donohue and Associates	AUG-1983
1985		1	
	JAAP Red Water Lagoon Sampling and Analysis, Remedial Action	Donohue and Associates	OCT-1985
1986			
	Midwest Site Confirmatory Survey, Sampling Report, Round 1	Dames and Moore	AUG-1986
	Midwest Site Confirmatory Survey, Sampling Report, Round 2	Dames and Moore	SEP-1986
	Midwest Site Confirmatory Survey Assessment Report	Dames and Moore	NOV-1986
1989			
	Assessment Report, PCB Spill Area, Group 70, LAP Area	Dames and Moore	FEB-1989
1990			
	Phase I Results Report, Remedial Investigation, Manufacturing Area	Dames and Moore	SEP-1990
1993			
	Phase II Remedial Investigation Report, Manufacturing Area	Dames and Moore	MAY-1993
	Phase I Remedial Investigation Results Report, LAP Area	Dames and Moore	JUL-1993
1994		·	
	Baseline Risk Assessment (Final), RI/FS, Manufacturing Area	Dames and Moore	MAR-1994
	Health Risk Assessment for Consumption of Deer Muscle and Liver from JAAP, (Final)	US Army Environmental Hygiene Agency	JUN-1994
	Phase I Ecological Risk Assessment (Final)	US Army Environmental Hygiene Agency	NOV-1994
	Phase II Aquatic Ecological Risk Assessment	US Army Environmental Hygiene Agency	NOV-1994
	Phase II Remedial Investigation (Final), LAP Area	Dames and Moore	NOV-1994
1995			<u>I</u>
- 300	Baseline Risk Assessment (Final), RI/FS, LAP Area	Dames and Moore	FEB-1995
	Baseline Risk Assessment (Final), RI/FS, LAP Area	Dames and Moore	APR-1995
1996	, , , ,		<u> </u>
1330	JAAP Preliminary Remediation Goals	OHM Remediation	APR-1996
	DAAL T Telliminary Remediation Goals	Services Corp.	7.11 11 1000

IRP Previous Studies

Phase II, Aquatic Ecological Risk Assessment USACHPPM JAN-1997		Title	Author	Date
Project Management Plan for the Environmental Removal Action, L6/Group 70 Feasibility Study, Groundwater Operable Unit, LAP Area Dames and Moore AUG-1997 Feasibility Study, Groundwater Operable Unit, Manufacturing Area Final Feasibility Study Report, LAP Area, Soil Operable Units Group Aug-1997 Units and Groundwater Operable Units Final Feasibility Study Report, Mfg Area, Soil Operable Units Final Feasibility Study Report, Mfg Area, Soil Operable Units Proposed Plans for the Groundwater Operable Units Proposed Plans for the Groundwater Operable Unit and the Soil Operable Unit of JoAAP Record of Decision, Soil and Groundwater Operable Unit and the Soil Operable Units, Manufacturing and Load-Assembly-Package Areas 1999 Final RD/RA Work plan for Groundwater and Soil MWH DEC-1999 Final Closure Report - Site M5 MWH SEP-2000 Final Closure Report - Site M5 MWH SEP-2000 Final Ordnance Removal and Site Characterization US Army Engineering and SEP-2001 Support Center Final Granace Removal and Site Characterization US Army Engineering and SEP-2001 Final Feasibility Study US Army Corps of Engineers, Louisville District Proposed Plan for the Soil Operable Unit, Interim Sites US Army MAR-2004 Final Record of Decision for SOU, Interim Sites US Army JUN-2004 Final Project Management Plan, PBC MKM JUN-2005 Final Project Management Plan, PBC MKM SEP-2005 Final Site M9 Work plan MKM SEP-2005 Final Site M9 Work plan MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan Interim Sites MWH OCT-2005 Final Closure Report - Site M6 MWH JAN-2006 Final Closure Report - Site M6 MWH MWH MAY-2006	1997			
Removal Action, Lé/Group 70 Feasibility Study, Groundwater Operable Unit, LAP Area Passibility Study, Groundwater Operable Unit, Manufacturing Area Final Feasibility Study Report, LAP Area, Soil Operable Units and Groundwater Operable Units Final Feasibility Study Report, LAP Area, Soil Operable Units and Groundwater Operable Units Final Feasibility Study Report, Mg Area, Soil Operable Units and Groundwater Operable Units Proposed Plans for the Groundwater Operable Unit and the Soil Operable Unit for JOAAP Record of Decision, Soil and Groundwater Operable Units, Manufacturing and Load-Assembly-Package Areas Pinal RD/RA Work plan for Groundwater and Soil MWH DEC-1999 Prairie Worker and Ecological PRG Reports MWH Final Ordnance Removal and Site Characterization US Army Engineering and SEP-2000 Proposed Plan for the Soil Operable Unit, Interim Sites US Army Corps of Engineers, Louisville Proposed Plan for the Soil Operable Unit, Interim Sites US Army S-Year Review, Soil & GW Final Project Management Plan, PBC MKM APR-2004 Final Project Management Plan, PBC MKM APR-2005 Final Site M9 Work plan Final LTMLTO Plan, PBC MKM SEP-2005 Final Site M9 Work plan Final El-4 Work plan Final Closure Report - Site M6 Final Closure Report - Site M6 Final Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Phase II, Aquatic Ecological Risk Assessment	USACHPPM	JAN-1997
Feasibility Study, Groundwater Operable Unit, Manufacturing Area Final Feasibility Study Report, LAP Area, Soil Operable Units and Groundwater Operable Units Final Feasibility Study Report, May Area, Soil Operable Units and Groundwater Operable Units Final Feasibility Study Report, Mig Area, Soil Operable Units and Groundwater Operable Units Proposed Plans for the Groundwater Operable Unit and the Soil Operable Unit for JOAAP Record of Decision, Soil and Groundwater Operable Units, Manufacturing and Load-Assembly-Package Areas Record of Decision, Soil and Groundwater Operable Units, Manufacturing and Load-Assembly-Package Areas Final RD/RA Work plan for Groundwater and Soil Final Closure Report - Site M5 Prairie Worker and Ecological PRG Reports Human Health Workgroup SEP-2000 Pinal Ordnance Removal and Site Characterization US Army Engineering and SEP-2001 Support Center Final Feasibility Study US Army Corps of Engineers, Louisville District Proposed Plan for the Soil Operable Unit, Interim Sites US Army MAR-2004 Final Record of Decision for SOU, Interim Sites US Army US Army US Army US Army US Army US Army MAR-2004 Final Record of Decision for SOU, Interim Sites US Army MAR-2005 Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan Final Site L4 Work plan Final Closure Report - Site M6 Final RD/RA Work plan Final Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006			IT Corporation	AUG-1997
Manufacturing Area Final Feasibility Study Report, LAP Area, Soil Operable Units and Groundwater Operable Units Dames and Moore SEP-1997 Units and Groundwater Operable Units Final Feasibility Study Report, Mg Area, Soil Operable Units OHM Corporation, Inc. SEP-1997 Units and Groundwater Operable Units OHM Corporation, Inc. DEC-1997 Units and Groundwater Operable Units OHM Corporation, Inc. DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1999 DEC-1997 DEC-1997 DEC-1999 DEC-1997 DEC-1997 DEC-1999 DEC-1997 DEC-1997 DEC-1999 DEC-1997 DEC-1997 DEC-1997 DEC-1997 DEC-1999 DEC-1997 DEC-1997 DEC-1997 DEC-1999 DEC-1997 DEC-1997		Feasibility Study, Groundwater Operable Unit, LAP Area	Dames and Moore	AUG-1997
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1998 Record of Decision, Soil and Groundwater Operable Units, Manufacturing and Load-Assembly-Package Areas		Units and Groundwater Operable Units	·	
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Units, Manufacturing and Load-Assembly-Package Areas Final RD/RA Work plan for Groundwater and Soil MWH DEC-1999 2000 Final Closure Report - Site M5 Prairie Worker and Ecological PRG Reports Human Health Workgroup SEP-2000 2001 Final Ordnance Removal and Site Characterization US Army Engineering and SEP-2001 Support Center 2004 Final Feasibility Study US Army Corps of Engineers, Louisville District District US Army MMH APR-2004 5-Year Review, Soil & GW MWH APR-2004 Final Record of Decision for SOU, Interim Sites US Army JUN-2004 2005 Final Project Management Plan, PBC MKM JUN-2005 Final Quality Control Plan, PBC MKM AUG-2005 Final Site M9 Work plan MKM SEP-2005 Final Site M9 Work plan MKM SEP-2005 Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006	1998			
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Final Closure Report - Site M5	1999			
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Prairie Worker and Ecological PRG Reports Human Health Workgroup SEP-2000 2001 Final Ordnance Removal and Site Characterization Support Center 2004 Final Feasibility Study Final Feasibility Study Final Feasibility Study Proposed Plan for the Soil Operable Unit, Interim Sites US Army MAR-2004 5-Year Review, Soil & GW Final Record of Decision for SOU, Interim Sites US Army JUN-2004 2005 Final Project Management Plan, PBC Final Quality Control Plan, PBC Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006	2000		1	
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Support Center	2001			
Final Feasibility Study US Army Corps of Engineers, Louisville District		Final Ordnance Removal and Site Characterization		SEP-2001
Engineers, Louisville District Proposed Plan for the Soil Operable Unit, Interim Sites US Army MAR-2004 5-Year Review, Soil & GW Final Record of Decision for SOU, Interim Sites US Army JUN-2004 2005 Final Project Management Plan, PBC Final Quality Control Plan, PBC Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM SEP-2005 Final Site L4 Work plan MKM NOV-2005 Final Site L4 Work plan MKM NOV-2005 Pinal Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006	2004			I ===
Proposed Plan for the Soil Operable Unit, Interim Sites US Army MAR-2004		Final Feasibility Study	Engineers, Louisville	FEB-2004
Final Record of Decision for SOU, Interim Sites US Army JUN-2004 Final Project Management Plan, PBC Final Quality Control Plan, PBC Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 Final Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006		Proposed Plan for the Soil Operable Unit, Interim Sites		MAR-2004
Final Project Management Plan, PBC MKM JUN-2005 Final Quality Control Plan, PBC MKM AUG-2005 Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan MKM SEP-2005 Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		5-Year Review, Soil & GW	MWH	APR-2004
Final Project Management Plan, PBC MKM JUN-2005 Final Quality Control Plan, PBC MKM AUG-2005 Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan MKM SEP-2005 Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Final Record of Decision for SOU, Interim Sites	US Army	JUN-2004
Final Quality Control Plan, PBC Final Accident Prevention Plan, PBC MKM AUG-2005 Final Site M9 Work plan Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 Pinal Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006	2005			
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Final Site M9 Work plan MKM SEP-2005 Final LTM/LTO Plan, PBC MKM SEP-2005 Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Final Quality Control Plan, PBC	MKM	AUG-2005
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Final RD/RA Work plan, Interim Sites MWH OCT-2005 Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Final Site M9 Work plan	MKM	SEP-2005
Final Site L4 Work plan MKM NOV-2005 2006 Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Final LTM/LTO Plan, PBC	MKM	SEP-2005
2006 Final Closure Report - Site M6 Final Treatment Report - Tetryl Soils MWH MAY-2006 MWH MAY-2006		Final RD/RA Work plan, Interim Sites	MWH	OCT-2005
Final Closure Report - Site M6 MWH JAN-2006 Final Treatment Report - Tetryl Soils MWH MAY-2006		Final Site L4 Work plan	MKM	NOV-2005
Final Treatment Report - Tetryl Soils MWH MAY-2006	2006		1	1
·		Final Closure Report - Site M6	MWH	JAN-2006
Final M6 Closure Report MWH JUN-2006		Final Treatment Report - Tetryl Soils	MWH	MAY-2006
		Final M6 Closure Report	MWH	JUN-2006

IRP Previous Studies

	Title	Author	Date
2006			
	Final Closure Report - Sites L1, L7, L8, L9, L10, L14, and M2	MWH	AUG-2006
2007			
	Final Remedial Action Completion Report - L4 Landfill	MKM	APR-2007
	Final M9 RIP Report	MKM	SEP-2007
	Final Remedial Action Completion Report - M9 North Ashpile	MKM	SEP-2007
2008		<u> </u>	·
	Final Historical Records Review Addendum, Joliet Army Ammunition Plant, Wilmington, Illinois	Malcolm Pirnie, Inc.	NOV-2008
2009			
	Final M11 RIP Report	MKM	MAR-2009
	Final M13 RIP Report	MKM	MAY-2009
	Final 5YR Review Groundwater OU	Aerostar	AUG-2009
	Final 5YR Review Soil OU	Aerostar	AUG-2009
	M13 RIP Report	MKM	SEP-2009
	L2/L3/L23A/M3/M4/M12 Closure Report	MWH	OCT-2009
2010			-
	Final L3 Closure Rpt	MWH	JUN-2010
	Final Bioremediation Report	MWH	JUL-2010
2011			-
	Final 2009 Semi-annual GW Monitoring Report	Toltest	SEP-2011
	2009 Final Annual GW Monitoring Report	Toltest	SEP-2011
	Final 2010 Semi-annual GW Monitoring Report	Toltest	DEC-2011
2012			·
	Final 2010 Annual GW Monitoring Report	Toltest	MAY-2012
	Final 2011 Semi-Annual GW Monitoring Report	Toltest	JUN-2012
2013		-	
	2011 Annual GW Monitoring Report	Toltest	MAR-2013

JOLIET AAP

Non-BRAC Excess Installation Restoration Program Site Descriptions

Site ID: JAAP-011
Site Name: M11 LANDFILL



Parcel: USDA 8 (423 acres)

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals

Media of Concern: Groundwater. Soil

<u>Phases</u>	Start	<u>End</u>
PA	198711	198803
SI	198711	198803
RI/FS	198803	199710
RD	199806	199906
IRA	198711	199311
RA(C)	200409	200709
LTM	200709	203709

RIP Date: N/A RC Date: 200709

SITE DESCRIPTION

The original study-site covered 100 acres in the southwestern portion of the manufacturing area. The area was mined for gravel and it later received a variety of wastes. The landfill area of approximately 20 acres was used from 1952 to 1978 and contains mostly construction debris. Manganese and sulfate waste pose a risk to the groundwater.

The consolidation of site debris resulted in capping about 11 acres of the site. It is part of soil remediation unit (SRU) 6 (landfills). In 2007 construction of a Resource Conservation and Recovery Act (RCRA) Subtitle D cap was begun and was completed in 2008.

Per Illinois (IL) Administrative Code, 30 years of monitoring is required for the landfill.

The remaining 89 acres are managed as tall grass prairie and LUCs are reported annual by the USDA.

89 acres have been transferred to the USDA; the 11-acre landfill area is intended to be transferred to the USDA.

CLEANUP/EXIT STRATEGY

Long-term, post-closure cap maintenance will be performed and funded under the performance-based contract (PBC) until 2014.

Post-PBC LTM beyond 2014 (including groundwater monitoring and cap maintenance) will be funded under site JAAP-GWM.

LTM will continue for a fixed 30 years after the 2008 cap installation based on the 1998 ROD.

Site ID: JAAP-013 Site Name: M13 GRAVEL/EXCAVATION PITS



Parcel: JADA 8 (19 acres)

Regulatory Driver: CERCLA

RRSE: LOW

Contaminants of Concern: Metals, Semi-volatiles (SVOC)

Media of Concern: Soil

Phases	Start	End
PA	198711	198803
SI	198711	198803
RI/FS	198803	199710
RD	199806	199906
RA(C)	200409	200709
LTM	200709	203709

RIP Date: N/A RC Date: 200709

SITE DESCRIPTION

This area totals 130 acres in the central portion of the manufacturing area and contains four pits that were originally mined for gravel. Later, the unused pits received various disposals. Thirteen acres required a RCRA Subtitle D cap. The soil is contaminated with metals and SVOCs.

The site is part of SRU6 (landfills). In 2007, construction of a RCRA Subtitle D cap was begun and was completed in 2008. In August 2000 the acreage outside of the landfill area was transferred to the state of IL. The 13-acre landfill area will be transferred to the state.

Soils- 117 acres were part of the 1998 ROD for soils. All remedial goals (RGs) have been met. Industrial use continues at the site. LUCs will be covered under the site-wide deed restriction verification program, which is covered under JAAP-GWM.

Groundwater- The groundwater at this site is part of a GMZ. Groundwater for this site was covered in the 1998 ROD. RGs have not been met. Based on the 2009 five-year review, the anticipated date to meet RGs is 2043 for 2,4 DNT, the slowest to meet RGs.

FY13 and FY14 GW monitoring is covered under a current contract managed under PBC@Joliet. All future GW costs are covered under JAAP-GWM.

CLEANUP/EXIT STRATEGY

Long-term, post-closure cap maintenance will be performed and funded under the PBC until 2014.

After 2014, post-PBC LTM costs (including groundwater monitoring and cap maintenance) will be captured under site JAAP-GWM.

LTM will continue for a fixed 30 years after the 2008 cap installation based on the 1998 ROD.

Site ID: JAAP-0L3
Site Name: DEMO AREA



Parcel: USDA 8 (423 acres)

Regulatory Driver: CERCLA RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Munitions and

explosives of concern (MEC)

Media of Concern: Soil

Phases	Start	End
PA	198711	198803
SI	198711	198803
RI/FS	199001	200312
RD	199806	200506
IRA	199610	200809
RA(C)	200410	200809
LTM	200809	203709

RIP Date: N/A RC Date: 200809

SITE DESCRIPTION

This site comprises 50 acres in the west central portion of the LAP Area. It was used for open combustion of refuse and contained a fire training site. The fire training area and soils east of demolition pits have metals (SRU2). Areas within the berms have metals and explosives (SRU3). Berm soil will be capped as part of SRU 6. Munitions and explosives of concern (MEC) are present.

In 1997, the site was fenced as part of an IRA. A GMZ has been established. This is a 1998 and 2004 ROD site and final remedial goals have been established for soils. About 3,330 cubic yards (cy) of explosives- and metals-contaminated soil was excavated and disposed of at the WCLF. Construction of a seven-acre landfill was completed in 2008. Approximately 28,800 cy of soil and debris were consolidated under the cap.

Soil on the site was covered under the 2004 ROD. All RGs have been met for soil on this site. Current and anticipated use of the site is tall grass prarie and that use is protective under the RGs. Site restrictions are verified in the annual report provided by the USDA confirming to the Army that deed restrictions are being met.

A landfill was driven by a decision in the 1998 ROD. The solid waste comingled with munitions provided an unacceptable risk. The comingled waste was consolidated and capped in 2007. The ROD dictates 30 years of groundwater monitoring. The landfill is bound by Prairie Creek on the west. The original bank was designed for a 100-year storm. In 2010 and 2011 large storms compromised the stability of the bank armoring. Approximately 50% of the riprap was sent down stream.

Groundwater standards were set by the 1998 ROD. Groundwater RGs for this site have not been met. According to the 2009 five-year review, the anticipated date to meet RGs was 2027. This date was based on RDX concentrations, the slowest to meet RGs.

This site is intended to be transferred to the USDA. In FY13 we will award either a bank stabilization effort under JAAP-GWM or a landfill removal under JAAP-001-R-03. FY13 and FY14 LTM are covered under PBC@Joliet. All other out-year costs are covered under JAAP-GWM.

CLEANUP/EXIT STRATEGY

Groundwater monitoring will continue at all sites identified above. Wells not required for monitoring will be properly closed and abandoned.

Site ID: JAAP-0L3
Site Name: DEMO AREA

After 2014, post-PBC LTM costs (including groundwater monitoring and cap maintenance) will be captured under site JAAP-GWM.

LTM will continue for a fixed 30 years after the 2008 cap installation based on the 1998 ROD.

Site ID: JAAP-GWM Site Name: INSTALLATION-WIDE LTM

STATUS

Parcel: USDA 8 (423 acres), USDA 7 (442 acres)

Regulatory Driver: CERCLA

RRSE: HIGH

Contaminants of Concern: Explosives, Metals, Volatiles (VOC)

Media of Concern: Groundwater

<u>Phases</u>	Start	<u>End</u>
PA	198711	198803
SI	198711	198803
RI/FS	199806	199906
RD	199906	199912
RA(C)	199906	199912
LTM	200001	204309

RIP Date: N/A RC Date: 199912

SITE DESCRIPTION

This site was created to address LTM at all JAAP sites. Installation-wide, five-year reviews for soil and groundwater will be captured under this site. Groundwater monitoring will be conducted at six GMZs and three landfills (JAAP-011, JAAP-013, and JAAP-0L3).

The groundwater activities are being evaluated to optimize the program.

CLEANUP/EXIT STRATEGY

In general, this site tracks requirements beyond the period of performance of the current performance-based acquisition (PBA) contract. Groundwater monitoring will continue at all sites identified above. Wells not required for monitoring will be properly closed and abandoned. This site will cover all out-year LTM and deed restriction verification activities. Since Joliet is an excess property, all future cleanup related activities will be captured under this site.

Site ID: PBC at Joliet Site Name: PBC

Parcel: USDA 8 (423 acres)

Regulatory Driver: CERCLA RRSE: LOW

Contaminants of Concern: Explosives, Metals

Media of Concern: Groundwater

Phases	Start	End		
PA	199307	200109		
RA(C)	200409	201003		
RA(O)	200409	201003		
LTM	201003	201412		

RIP Date: 201003 RC Date: 201003

SITE DESCRIPTION

This site was created to address funding information for the PBC for JAAP. The period of performance for this contract is through December 2014. The PBC includes six GMZs and three landfills (JAAP-011, JAAP-013, and JAAP-0L3). Ramp-down and optimization of LTM is a requirement of the contract.

CLEANUP/EXIT STRATEGY

This PBA runs through December 2014 and includes the FY13 five-year review. The FY14 five-year review is occurring one year early to allow implementation of any approved ramp-down proposals.

IRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
JAAP-001	SOUTHERN ASH PILE	200709	Final M1 Remedial Action Completion Report, Soil Operable Unit, M1 Southern Ash Pile. February 2010
JAAP-002	EXPLOSIVE BURNING GROUNDS	200610	Final Closure Report - Sites L1, L7, L8, L9, L10, L14, and M2, October 2006
JAAP-003	FLASHING GROUNDS	200706	Final Closure Report - Sites L2, L5, L23A, M3, M4 and M12. Phase 2 Remedial Action - Soils OU, MWH, October 2009.
JAAP-004	LEAD AZIDE AREA	200712	Final Closure Report - Sites L2, L5, L23A, M3, M4 and M12. Phase 2 Remedial Action - Soils OU, MWH, October 2009.
JAAP-005	M5 - TETRYL PRODUCTION AREA	199909	Final Closure Report - Site M5, JOAAP, September 2000
JAAP-006	M6 TNT DITCH COMPLEX	200509	Final Closure Report - Site M6, JOAAP, January 2006
JAAP-007	M7 - RED WATER AREA SOUTH OF TNT DITCH	200212	Final Closure Report - Site M7, JOAAP, November 2003
JAAP-008	ACID MANUFACTURING AREA	200301	Final ROD - October 1998
JAAP-009	NORTHERN ASH PILE	200709	Remedial Action Completion Report - M9, JOAAP, September 2007
JAAP-010	TOLUENE TANK FARMS (3)	200004	Final Closure Report - Site M10, JOAAP, March 2003
JAAP-012	SELLITE MANUFACTURING AREA	200706	Final Closure Report - Sites L2, L5, L23A, M3, M4 and M12. Phase 2 Remedial Action - Soils OU, MWH, October 2009.
JAAP-014	FORMER POND AREA	199305	1998 ROD
JAAP-015	FORMER SEWAGE TREATMENT PLANT	199305	1998 ROD
JAAP-016	MOTOR POOL AREA	199305	1998 ROD
JAAP-017	LAUNDRY FACILITY	199305	1998 ROD
JAAP-018	HERBICIDE STORAGE AREA	199305	1998 ROD
JAAP-0L1	GROUP 61 TNT - RIDGE & FURROW SYSTEM	200606	Joliet Army Ammunition Plant; Wilmington, Illinois; Final Closure Report - Sites L1, L7, L8, L10, L14, M2; Phase II Remedial Action; Soils Operable Unit; Revision 1, Montgomery, Watson, Harza, October 2006.
JAAP-0L2	EXPLOSIVE BURNING GROUND	200709	Site Specific Final Report, Military Munitions Response Program, Site L2 1998 ROD 2004 ROD
JAAP-0L4	L4 LANDFILL AREA	200708	Final Remediation Report for Soil Operable Unit Number 6 - L4

IRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation			
			Landfill, MKM Engineers, August 2007.			
JAAP-0L5	SALVAGE YARD	200709	Final Closure Report - Sites L2, L5, L23A, M3, M4 and M12. Phase 2 Remedial Action - Soils OU, MWH, October 2009.			
JAAP-0L6	GROUP 70 - MOTOR POOL	199711	1998 ROD			
JAAP-0L7	GROUP 1	200606	Joliet Army Ammunition Plant; Wilmington, Illinois; Final Closure Report - Sites L1, L7, L8, L10, L14, M2; Phase II Remedial Action; Soils Operable Unit; Revision 1, Montgomery, Watson, Harza, October 2006.			
JAAP-0L8	GROUP 2	200606	Joliet Army Ammunition Plant; Wilmington, Illinois; Final Closure Report - Sites L1, L7, L8, L10, L14, M2; Phase II Remedial Action; Soils Operable Unit; Revision 1, Montgomery, Watson, Harza, October 2006.			
JAAP-0L9	GROUP 3	200608	Joliet Army Ammunition Plant; Wilmington, Illinois; Final Closure Report - Sites L1, L7, L8, L10, L14, M2; Phase II Remedial Action; Soils Operable Unit; Revision 1, Montgomery, Watson, Harza, October 2006.			
JAAP-L10	GROUP 3A	200606	Final Closure Report - Sites L1, L7, L8, L9, L10, L14, M2, October 2006.			
JAAP-L11	TEST SITE	199912	Final Closure Report - Sites L11 and L16, December 2003			
JAAP-L12	DOYLE LAKE AREA	199412	Final Record of Decision, October 1998			
JAAP-L13	GROUP 68	199412	1998 ROD			
JAAP-L14	GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER	200606	Final Closure Report - Sites L1, I7, L8, L9, L10, L14, and M2, October 2006			
JAAP-L15	GROUP 5	199604	1998 ROD			
JAAP-L16	GROUP 6	200212	Final Closure Report - Site L11, L16, December 2003			
JAAP-L17	GROUP 7	199912	Final PCB Sites RA Report, December 2001			
JAAP-L18	GROUP 8	199412	1998 ROD			
JAAP-L19	GROUP 9	199604	1998 ROD			
JAAP-L20	GROUP 20	199412	1998 ROD			
JAAP-L21	SANITARY LANDFILL	199412	1998 ROD			
JAAP-L22	GROUP 25 RAILROAD CLASSIFICATION YARD	199412	1998 ROD			

IRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
JAAP-L23	DISPOSAL PIT AT GROUP 27	200706	1998 ROD
JAAP-L24	GROUP 29	199412	1998 ROD
JAAP-L25	GROUP 62	199412	1998 ROD
JAAP-L26	GROUP 63	199412	1998 ROD
JAAP-L27	GROUP 64	199412	1998 ROD
JAAP-L28	GROUP 65	199412	1998 ROD
JAAP-L29	RCRA HAZARDOUS STORAGE (GROUP 66)	199412	1998 ROD
JAAP-L30	GROUP 66A	199412	1998 ROD
JAAP-L31	EXTRACTION PITS	199412	1998 ROD
JAAP-L32	GROUP 60	199510	1998 ROD
JAAP-L33	PVC AREA	199412	1998 ROD
JAAP-L34	FORMER BURNING AREA	199412	1998 ROD
JAAP-L35	FILL AREA	199412	1998 ROD

Date of IRP Inception: 198711

Past Phase Completion Milestones

1988

SI

PΑ

(JAAP-001 - SOUTHERN ASH PILE, JAAP-002 - EXPLOSIVE BURNING GROUNDS, JAAP-003 -FLASHING GROUNDS, JAAP-004 - LEAD AZIDE AREA, JAAP-005 - M5 - TETRYL PRODUCTION AREA, JAAP-006 - M6 TNT DITCH COMPLEX, JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH. JAAP-008 - ACID MANUFACTURING AREA, JAAP-009 - NORTHERN ASH PILE, JAAP-010 - TOLUENE TANK FARMS (3), JAAP-011 - M11 LANDFILL, JAAP-012 - SELLITE MANUFACTURING AREA. JAAP-013 - M13 GRAVEL/EXCAVATION PITS. JAAP-014 - FORMER POND AREA, JAAP-015 - FORMER SEWAGE TREATMENT PLANT, JAAP-0L4 - L4 LANDFILL AREA, JAAP-0L5 - SALVAGE YARD, JAAP-0L6 - GROUP 70 - MOTOR POOL, JAAP-0L7 - GROUP 1, JAAP-0L8 - GROUP 2, JAAP-0L9 - GROUP 3, JAAP-GWM - INSTALLATION-WIDE LTM, JAAP-L10 - GROUP 3A, JAAP-L11 - TEST SITE, JAAP-L12 - DOYLE LAKE AREA, JAAP-L13 - GROUP 68, JAAP-L14 - GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER, JAAP-L15 - GROUP 5, JAAP-L16 - GROUP 6, JAAP-L17 - GROUP 7, JAAP-L18 - GROUP 8, JAAP-L19 - GROUP 9, JAAP-L20 - GROUP 20, JAAP-L21 - SANITARY LANDFILL, JAAP-L22 - GROUP 25 RAILROAD CLASSIFICATION YARD, JAAP-L23 - DISPOSAL PIT AT GROUP 27, JAAP-L24 - GROUP 29, JAAP-L25 - GROUP 62, JAAP-L26 - GROUP 63, JAAP-L27 - GROUP 64, JAAP-L28 - GROUP 65, JAAP-L29 - RCRA HAZARDOUS STORAGE (GROUP 66), JAAP-L30 - GROUP 66A, JAAP-L31 -EXTRACTION PITS, JAAP-L32 - GROUP 60, JAAP-L33 - PVC AREA, JAAP-L34 - FORMER BURNING AREA, JAAP-L35 - FILL AREA, JAAP-016 - MOTOR POOL AREA, JAAP-017 - LAUNDRY FACILITY, JAAP-018 - HERBICIDE STORAGE AREA, JAAP-0L1 - GROUP 61 TNT - RIDGE & FURROW SYSTEM, JAAP-0L2 - EXPLOSIVE BURNING GROUND, JAAP-0L3 - DEMO AREA) (JAAP-001 - SOUTHERN ASH PILE, JAAP-002 - EXPLOSIVE BURNING GROUNDS, JAAP-003 -FLASHING GROUNDS, JAAP-004 - LEAD AZIDE AREA, JAAP-005 - M5 - TETRYL PRODUCTION AREA, JAAP-006 - M6 TNT DITCH COMPLEX, JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH, JAAP-008 - ACID MANUFACTURING AREA, JAAP-009 - NORTHERN ASH PILE, JAAP-010 - TOLUENE TANK FARMS (3), JAAP-011 - M11 LANDFILL, JAAP-012 - SELLITE MANUFACTURING AREA, JAAP-013 - M13 GRAVEL/EXCAVATION PITS, JAAP-014 - FORMER POND AREA, JAAP-015 - FORMER SEWAGE TREATMENT PLANT, JAAP-0L4 - L4 LANDFILL AREA, JAAP-0L5 - SALVAGE YARD, JAAP-0L6 - GROUP 70 - MOTOR POOL, JAAP-0L7 - GROUP 1, JAAP-0L8 - GROUP 2, JAAP-0L9 - GROUP 3, JAAP-GWM - INSTALLATION-WIDE LTM, JAAP-L10 - GROUP 3A, JAAP-L11 - TEST SITE, JAAP-L12 - DOYLE LAKE AREA, JAAP-L13 - GROUP 68, JAAP-L14 - GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER, JAAP-L15 - GROUP 5, JAAP-L16 - GROUP 6, JAAP-L17 - GROUP 7, JAAP-L18 - GROUP 8, JAAP-L19 - GROUP 9, JAAP-L20 - GROUP 20, JAAP-L21 - SANITARY LANDFILL, JAAP-L22 - GROUP 25 RAILROAD CLASSIFICATION YARD, JAAP-L23 - DISPOSAL PIT AT GROUP 27, JAAP-L24 - GROUP 29, JAAP-L25 - GROUP 62, JAAP-L26 - GROUP 63, JAAP-L27 - GROUP 64, JAAP-L28 - GROUP 65, JAAP-L29 - RCRA HAZARDOUS STORAGE (GROUP 66), JAAP-L30 - GROUP 66A, JAAP-L31 -EXTRACTION PITS, JAAP-L32 - GROUP 60, JAAP-L33 - PVC AREA, JAAP-L34 - FORMER BURNING AREA, JAAP-L35 - FILL AREA, JAAP-016 - MOTOR POOL AREA, JAAP-017 - LAUNDRY FACILITY, JAAP-018 - HERBICIDE STORAGE AREA, JAAP-0L1 - GROUP 61 TNT - RIDGE & FURROW SYSTEM, JAAP-0L2 - EXPLOSIVE BURNING GROUND, JAAP-0L3 - DEMO AREA)

1993

RI/FS (JAAP-014 - FORMER POND AREA, JAAP-015 - FORMER SEWAGE TREATMENT PLANT, JAAP-

016 - MOTOR POOL AREA, JAAP-017 - LAUNDRY FACILITY, JAAP-018 - HERBICIDE STORAGE

AREA)

1994

IRA (JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH, JAAP-009 - NORTHERN ASH PILE,

JAAP-011 - M11 LANDFILL, JAAP-L21 - SANITARY LANDFILL)

1995

Final JOLIET AAP Installation Action Plan -

29

1995

RI/FS (JAAP-L12 - DOYLE LAKE AREA, JAAP-L13 - GROUP 68, JAAP-L18 - GROUP 8, JAAP-L20 -

GROUP 20, JAAP-L21 - SANITARY LANDFILL, JAAP-L22 - GROUP 25 RAILROAD

CLASSIFICATION YARD, JAAP-L24 - GROUP 29, JAAP-L25 - GROUP 62, JAAP-L26 - GROUP 63, JAAP-L27 - GROUP 64, JAAP-L28 - GROUP 65, JAAP-L29 - RCRA HAZARDOUS STORAGE (GROUP 66), JAAP-L30 - GROUP 66A, JAAP-L31 - EXTRACTION PITS, JAAP-L33 - PVC AREA,

JAAP-L35 - FILL AREA, JAAP-L34 - FORMER BURNING AREA)

1996

RI/FS (JAAP-L15 - GROUP 5, JAAP-L17 - GROUP 7, JAAP-L19 - GROUP 9, JAAP-L32 - GROUP 60)

IRA (JAAP-008 - ACID MANUFACTURING AREA)

1997

IRA (JAAP-001 - SOUTHERN ASH PILE, JAAP-006 - M6 TNT DITCH COMPLEX, JAAP-0L2 -

EXPLOSIVE BURNING GROUND)

RI/FS (JAAP-0L6 - GROUP 70 - MOTOR POOL)
RD (JAAP-0L6 - GROUP 70 - MOTOR POOL)

1998

RI/FS (JAAP-001 - SOUTHERN ASH PILE, JAAP-005 - M5 - TETRYL PRODUCTION AREA, JAAP-006 -

M6 TNT DITCH COMPLEX, JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH, JAAP-008 - ACID MANUFACTURING AREA, JAAP-009 - NORTHERN ASH PILE, JAAP-010 - TOLUENE TANK FARMS (3), JAAP-011 - M11 LANDFILL, JAAP-013 - M13 GRAVEL/EXCAVATION PITS, JAAP-0L4 -

L4 LANDFILL AREA, JAAP-L11 - TEST SITE, JAAP-L16 - GROUP 6)

RA(C) (JAAP-0L6 - GROUP 70 - MOTOR POOL)

1999

RI/FS

RA(C) (JAAP-005 - M5 - TETRYL PRODUCTION AREA, JAAP-008 - ACID MANUFACTURING AREA,

JAAP-010 - TOLUENE TANK FARMS (3)) (JAAP-GWM - INSTALLATION-WIDE LTM)

RD (JAAP-001 - SOUTHERN ASH PILE, JAAP-005 - M5 - TETRYL PRODUCTION AREA, JAAP-006 -

M6 TNT DITCH COMPLEX, JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH, JAAP-008 - ACID MANUFACTURING AREA, JAAP-009 - NORTHERN ASH PILE, JAAP-010 - TOLUENE TANK FARMS (3), JAAP-011 - M11 LANDFILL, JAAP-013 - M13 GRAVEL/EXCAVATION PITS, JAAP-0L4 -

L4 LANDFILL AREA, JAAP-L11 - TEST SITE, JAAP-L16 - GROUP 6, JAAP-L17 - GROUP 7)

2000

LTM (JAAP-010 - TOLUENE TANK FARMS (3))
RD (JAAP-GWM - INSTALLATION-WIDE LTM)

RA(C) (JAAP-GWM - INSTALLATION-WIDE LTM, JAAP-L11 - TEST SITE, JAAP-L17 - GROUP 7)

2001

PA (PBC at Joliet - PBC)

2002

RA(C) (JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH)

2003

RA(C) (JAAP-L16 - GROUP 6)

RI/FS (JAAP-0L5 - SALVAGE YARD)

LTM (JAAP-007 - M7 - RED WATER AREA SOUTH OF TNT DITCH, JAAP-008 - ACID MANUFACTURING

AREA)

2004

IRP Schedule

2004

RI/FS (JAAP-002 - EXPLOSIVE BURNING GROUNDS, JAAP-003 - FLASHING GROUNDS, JAAP-004 -

LEAD AZIDE AREA, JAAP-012 - SELLITE MANUFACTURING AREA, JAAP-017 - GROUP 1, JAAP-018 - GROUP 2, JAAP-019 - GROUP 3, JAAP-110 - GROUP 3A, JAAP-114 - GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER, JAAP-123 - DISPOSAL PIT AT GROUP 27, JAAP-011 - GROUP 61 TNT - RIDGE & FURROW SYSTEM, JAAP-012 - EXPLOSIVE BURNING GROUND,

JAAP-0L3 - DEMO AREA)

2005

RD (JAAP-002 - EXPLOSIVE BURNING GROUNDS, JAAP-003 - FLASHING GROUNDS, JAAP-004 -

LEAD AZIDE AREA, JAAP-012 - SELLITE MANUFACTURING AREA, JAAP-0L5 - SALVAGE YARD, JAAP-0L7 - GROUP 1, JAAP-0L8 - GROUP 2, JAAP-0L9 - GROUP 3, JAAP-L10 - GROUP 3A, JAAP-L14 - GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER, JAAP-L23 - DISPOSAL PIT AT GROUP 27, JAAP-0L1 - GROUP 61 TNT - RIDGE & FURROW SYSTEM, JAAP-0L2 - EXPLOSIVE

BURNING GROUND, JAAP-0L3 - DEMO AREA)

RA(C) (JAAP-006 - M6 TNT DITCH COMPLEX)

2006

RA(C) (JAAP-0L7 - GROUP 1, JAAP-0L8 - GROUP 2, JAAP-0L9 - GROUP 3, JAAP-L10 - GROUP 3A,

JAAP-L14 - GROUP 4 - FUSE PRODUCTN/SMOKELESS POWDER, JAAP-0L1 - GROUP 61 TNT -

RIDGE & FURROW SYSTEM)

2007

RA(C) (JAAP-001 - SOUTHERN ASH PILE, JAAP-002 - EXPLOSIVE BURNING GROUNDS, JAAP-003 -

FLASHING GROUNDS, JAAP-004 - LEAD AZIDE AREA, JAAP-009 - NORTHERN ASH PILE, JAAP-

011 - M11 LANDFILL, JAAP-012 - SELLITE MANUFACTURING AREA, JAAP-013 - M13

GRAVEL/EXCAVATION PITS, JAAP-0L4 - L4 LANDFILL AREA, JAAP-0L5 - SALVAGE YARD, JAAP-

L23 - DISPOSAL PIT AT GROUP 27, JAAP-0L2 - EXPLOSIVE BURNING GROUND)

2008

IRA (JAAP-0L3 - DEMO AREA)

RA(O) (JAAP-004 - LEAD AZIDE AREA)

RA(C) (JAAP-0L3 - DEMO AREA)

2010

RA(C) (PBC at Joliet - PBC) RA(O) (PBC at Joliet - PBC)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID Site Name ROD/DD Title ROD/DD Date

Final RA(C) Completion Date: 201003

Schedule for Next Five-Year Review: 2014

Estimated Completion Date of IRP at Installation (including LTM phase): 204309

JOLIET AAP IRP Schedule

					= phase underway			
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-011	M11 LANDFILL	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-013	M13 GRAVEL/EXCAVATION PITS	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-0L3	DEMO AREA	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-GWM	INSTALLATION-WIDE LTM	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
PBC at Joliet	PBC	LTM						

JOLIET AAP

Non-BRAC Excess Military Munitions Response Program

MMRP Summary

Installation Total Army Environmental Database-Restoration (AEDB-R) Sites/Closeout Sites Count: 6/1

Installation Site Types with Future and/or Underway Phases

3 Burn Area

(JAAP-001-R-01, JAAP-002-R-01, JAAP-004-R-01)

1 Open Burning/Open Detonation (OB/OD)

(JAAP-001-R-03)

1 Unexploded Munitions/Ordnance

(JAAP-001-R-02)

Most Widespread Contaminants of Concern

Munitions and explosives of concern (MEC)

Media of Concern

Soil

Completed Remedial Actions (Interim Remedial Actions / Final Remedial Actions (IRA/FRA))

Site ID	Site Name	Action	Remedy	FY	Cost
JAAP-001- R-01	DEMOLITION AREA (L3)	IRA	UXO CLEARANCE	2008	TBD
JAAP-002- R-01	EXPLOSIVE BURNING GROUND 1 (L2)	IRA	UXO CLEARANCE	2008	TBD
JAAP-004- R-01	FORMER BÜRNING AREA (L34)	IRA	UXO CLEARANCE	2008	TBD

Duration of MMRP

Year of MMRP Inception: 200304

Estimated Date for Remedy-In-Place (RIP)/Response Complete (RC): 201904/201904

Date of MMRP completion including Long Term Management (LTM): 204309

MMRP Contamination Assessment

Contamination Assessment Overview

The main concern of the Military Munitions Response Program (MMRP) is to ensure that the lands are safe for their intended public re-use. The five sites in the program have been transferred or will transfer to the USDA (US Forest Service) and are to be included in the Midewin National Tallgrass Prairie. As such, MEC clearance is required.

All five sites were associated with various open burning (OB)/open detonation (OD) operations. Sites JAAP-001-R-01, JAAP-001-R-02, and JAAP-002-R-01 are buffer areas around what were active OB/OD grounds. Site JAAP-004-R-01 was a series of burning pads. Site JAAP-001-R-03 is the capped area within L3 and will provide a site for removing the capped area.

The concern at sites JAAP-001-R-01, JAAP-001-R-02, and JAAP-002-R-01 is that burning operations within the active areas may have caused items to be scattered outwardly. This can occur if any munitions "pop" during the burn, causing an adjacent item to become airborne. There is known ordnance scrap in boundary areas.

The concern at JAAP-004-R-01 stems from intact cases of non-metallic ordnance items being located there. Conventional ordnance detection practices may have failed to locate non-metallic items.

Three of the five sites have undergone and passed investigations that addressed the potential for soil or groundwater contamination.

In September 2002, the closed, transferring, or transferred (CTT) range inventory was completed.

In May 2005, the site inspection (SI) was completed for JAAP-001-R-01, JAAP-002-R-01, and JAAP-004-R-01. These three sites were recommended for further RA. A contract was awarded and the necessary responses were completed.

JAAP-001-R-02, established in January 2008, is the result of physical observation of MEC beyond the boundaries set for JAAP-001-R-01 and JAAP-002-R-01 during the interim remedial action (IRA) of those two sites. The SI for JAAP-001-R-02 was completed in fall of 2009. The RI is currently underway for this site.

JAAP-001-R-03 was established in 2011. This site is the capped area within IRP site L3. This site was created to spend MMRP money on just the MEC capped area of L3, therefore differentiating the fact that the rest of L3 is not in need of attention.

Cleanup Exit Strategy

JAAP-001-R-02 is expected to require site clearance. LTM and five-year reviews will be performed as required for all MMRP sites.

MMRP Previous Studies

	Title	Author	Date
2001			
	Ordnance Removal and Site Characterization (ORSC) Report	US Army Engineering and Support Center	SEP-2001
2002			
	Final Closed, Transferring and Transferred Range Inventory	e2M	SEP-2002
2005			
	Final SI, MMRP	e2M	MAY-2005
2008			
	Final, Historical Records Review Addendum	Malcom Pirnie	NOV-2008
2009		<u> </u>	<u> </u>
	Final Site Inspection Addendum Work plan	Malcom Pirnie	FEB-2009
	Final Site Inspection Addendum Report	Malcolm Pirnie	SEP-2009
2010		1	
	L3 Site Specific Final Report	MKM	MAY-2010
	L2 Site Specific Final Report	MKM	MAY-2010
	L34 Site Specific Final Report	MKM	MAY-2010
2011		,	,
	MMRP RI Workplan JOAAP-001-R-02	Advent	NOV-2011

JOLIET AAP

Non-BRAC Excess Military Munitions Response Program Site Descriptions

Site ID: JAAP-001-R-01
Site Name: DEMOLITION AREA (L3)



Parcel: NONE

Regulatory Driver: CERCLA MRSPP Score: No longer required

Contaminants of Concern: Munitions and explosives of concern

(MEC)

Media of Concern: Soil

<u>Phases</u>	Start	<u>End</u>
PA	200304	200305
SI	200309	200505
RI/FS	200709	200809
IRA	200510	200809
LTM	200810	204309

RIP Date: N/A RC Date: 200809

SITE DESCRIPTION

This 25-acre site consists of a buffer of about 200 feet surrounding the demolition area site in the west central portion of the LAP area that was used from 1940 to 1975. The area is of concern because of the possibility of kick-out from demolition operations.

The demolition area was used for OB of combustible refuse and munitions crates and was also the location of a fire training area consisting of less than one acre.

During the ordnance removal and site characterization study, one-half of a BLU-26/B munition was discovered as well as 30 other unexploded ordnance (UXO) items including 40 millimeter (mm) rifle grenades, M-T83 PD fuses, 57mm projectiles, 155mm projectiles, and 105mm projectiles. The site characterization was not completed, so there is a possibility that more UXO are present at this site. This MMRP site surrounds the site identified under the AEDB-R program as JAAP-L3 and is currently undeveloped. It is scheduled to transfer to the USDA.

In 2007, an IRA was undertaken and site work was completed in FY07. A 1 ft clearance across the site was completed. Reporting was completed in FY08.

To complete proper closure under CERCLA, a desktop RI/FS will be completed to summarize the work completed on the site and document LUCs as the selected remedy. A DD will follow as well as an LTM plan. The RI/DD is going to be awarded in 2013.

The five-year review is going to be included in the installation-wide five-year review, which is tracked under JAAP-GWM.

CLEANUP/EXIT STRATEGY

Closeout documentation will be awarded in a 2013 contract to document LUCs as the selected remedy. LTM will continue. All five-year reviews will be completed with the installation-wide five-year review.

Site ID: JAAP-001-R-02

Site Name: L2-L3 Extended Buffer



Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: 03

Contaminants of Concern: Munitions and explosives of concern

(MEC)

Media of Concern: Soil

<u>Phases</u>	Start	End
PA	200710	200711
SI	200803	200909
RI/FS	200910	201706
RD	201701	201708
RA(C)	201709	201903

RIP Date: N/A RC Date: 201904

SITE DESCRIPTION

In 1999 an engineering evaluation/cost analysis (EE/CA) was prepared which recommended clearing a 200-foot buffer around IRP sites JAAP-0L2 and JAAP-0L3. The EE/CA was implemented; the findings and recommendations of the EE/CA were carried through the initial MMRP process.

The L2-L3 extended buffer is the result of physical observation of MEC beyond the boundaries set for JAAP-001-R-01 and JAAP002-R-01 during the IRA of those two sites. Based on the types of munitions found at the installation restoration (IR) and munitions response (MR) sites, and the perimeters of the IR sites, a blast distance diagram was constructed. This resulted in an area of approximately 396 acres which does not include either the IR or MR sites inside this newly established site.

Both contractor and USACE personnel walked the property and have found MEC similar to that found at both the IR and MR sites.

The SI was completed in September 2009 and recommended approximately 200 acres for further study.

An RI is underway and due to be completed in FY14. The length of the RI has been extended to increase the acreage back to 396, based on the fieldwork of the 200 acres. The FS through DD is expected to be awarded in FY15. RD and RA(C) are anticipated to be awarded as options to the FS contract. 1 ft UXO clearance, based on future land use, is anticipated. LTM is anticipated, but will be added when the findings of the study phase are more complete.

CLEANUP/EXIT STRATEGY

Pending the results of the RI, the following actions may be required:

- -an FS,
- -a RD,
- -a MEC RA,
- -ICs, and
- -five-year reviews.

The MRSPP score for this site was reviewed.

Site ID: JAAP-001-R-03
Site Name: Capped L3 Area



Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: 04

Contaminants of Concern: Munitions and explosives of concern

(MEC), Munitions constituents (MC)

Media of Concern: Soil

Phases	Start	End
PA	200606	200607
SI	200606	200712
RI/FS	201201	201712
IRA	201303	201712

RIP Date: N/A **RC Date:** 201712

SITE DESCRIPTION

This MMRP site addresses the munitions aspect of the Joliet L3 capped area. In 2007, it was determined that seven acres of IRP site L3 contained MEC and material presenting potential explosive hazard (MPPEH) at a higher density than the rest of the site. The remainder of the site was undergoing a one-foot removal action to address MEC that was deposited during OB/OD operations. When approaching these seven acres, the amount of metallic debris had increased such that a one-foot clearance would no longer be sufficient to address MEC concerns. Due to the limited technology at the time, the decision was made to cap this area of higher density material. The RA (cap) was captured under site JAAP-0L3.

Fill material from the popping furnace was placed over the seven acres as a soil cover and then the area was capped. The soil cover was certified as munitions debris and scrap (MDAS) prior to placement.

In 2011, heavy rains compromised the edge of the cap that runs along Prairie Creek. The Army will award a contract in FY13 to include removal of the capped area. Once the soil and MEC are removed, LTM will continue under the IRP site.

CLEANUP/EXIT STRATEGY

The Army is in the process of determining if removal of the capped area is feasible. LTM under any condition will re-engage under the IRP site once MMRP work is done.

Site ID: JAAP-002-R-01 Site Name: EXPLOSIVE BURNING GROUND 1 (L2)



Parcel: NONE

Regulatory Driver: CERCLA MRSPP Score: No longer required

Contaminants of Concern: Munitions and explosives of concern

(MEC)

Media of Concern: Soil

<u>Phases</u>	Start	<u>End</u>
PA	200304	200305
SI	200309	200505
RI/FS	200709	200809
IRA	200510	200809
LTM	200810	204309

RIP Date: N/A RC Date: 200809

SITE DESCRIPTION

This site of approximately 22 acres consists of a band of about 200 feet surrounding the explosive burning ground in the west central portion of the LAP area. The area was used between 1940 and 1975 and is of concern because of the possibility of kick-out from the burning grounds.

The explosive burning ground was used for the open combustion of munitions and explosive wastes and also contained popping furnaces and oil disposal pits.

The burning grounds were suspected of containing BLU-26/B sub-munitions; however, only miscellaneous parts were located during the ordnance removal and site characterization study. During the site characterization, 92 additional UXO items were discovered including M48 nose fuses, M66 base fuses, miscellaneous fuse boosters, and 75mm projectiles. The site characterization was not completed, so there is a possibility that more UXO is present. This site is intended to transfer to the USDA.

In 2007, an IRA was undertaken and site work was completed in FY07. The site was cleared to 1 ft. Reporting was completed in FY08.

To complete proper closure under CERCLA, a RI/DD will be awarded in FY13 and document LUCs as the selected remedy.

The five-year review is going to be included in the installation-wide five-year review, which is tracked under JAAP-GWM.

CLEANUP/EXIT STRATEGY

Closeout documentation will be awarded in a 2013 contract to document LUCs as the selected remedy. LTM will continue. All five-year reviews will be completed with the installation-wide five-year review.

Site ID: JAAP-004-R-01 Site Name: FORMER BURNING AREA (L34)



Parcel: NONE

Regulatory Driver: CERCLA

MRSPP Score: No longer required

Contaminants of Concern: Munitions and explosives of concern

(MEC)

Media of Concern: Soil

Phases	Start	End
PA	200304	200305
SI	200309	200505
RI/FS	200709	200809
IRA	200510	200809
LTM	200810	201609

RIP Date: N/A RC Date: 200809

SITE DESCRIPTION

This site covers approximately 4.5 acres in the central portion of the LAP area. It was used to burn raw explosives and backfill materials. During the ordnance removal and site characterization study, ceramic items believed to be the bodies of nonmetallic mines containing explosive residues were located. Although UXO was not located during the study, 15 related scrap items were located consisting of ceramic and glass M5 mines, and nose and base fuses. Less than 10 percent of this site was cleared, so there is a possibility that UXO may still be present. The site is identified under the AEDB-R program as JAAP-L34 and required NFA relative to hazardous, toxic, and radiological waste (HTRW). The site is scheduled to transfer to the USDA.

In 2007, an IRA was undertaken and site work was completed in FY07. Reporting was completed in FY08. No MEC was found.

To complete proper closure under CERCLA, a desktop RI/FS will be completed to summarize the work completed on the site and document NFA as the selected remedy. A DD will follow. The work will be awarded in FY13 and completed in January 2016. This site will be an NFA site in the installation-wide five-year review.

CLEANUP/EXIT STRATEGY

Closeout documentation will be awarded in a 2013 contract to document LUCs as the selected remedy. LTM will continue. All five-year reviews will be completed with the installation-wide five-year review.

MMRP Site Closeout (No Further Action) Summary

Site ID	Site Name	NFA Date	Documentation
JAAP-003-R-	TRAINING AREA 7	200505	MMRP Final Site Inspection by e2M.
01			

Date of MMRP Inception 200304

Past Phase Completion Milestones

2003

PA (JAAP-001-R-01 - DEMOLITION AREA (L3), JAAP-002-R-01 - EXPLOSIVE BURNING GROUND 1

(L2), JAAP-003-R-01 - TRAINING AREA 7, JAAP-004-R-01 - FORMER BURNING AREA (L34))

2005

SI (JAAP-001-R-01 - DEMOLITION AREA (L3), JAAP-004-R-01 - FORMER BURNING AREA (L34),

JAAP-002-R-01 - EXPLOSIVE BURNING GROUND 1 (L2), JAAP-003-R-01 - TRAINING AREA 7)

2006

PA (JAAP-001-R-03 - Capped L3 Area)

2008

PA (JAAP-001-R-02 - L2-L3 Extended Buffer)

SI (JAAP-001-R-03 - Capped L3 Area)

IRA (JAAP-001-R-01 - DEMOLITION AREA (L3), JAAP-002-R-01 - EXPLOSIVE BURNING GROUND 1

(L2), JAAP-004-R-01 - FORMER BURNING AREA (L34))

RI/FS (JAAP-001-R-01 - DEMOLITION AREA (L3), JAAP-002-R-01 - EXPLOSIVE BURNING GROUND 1

(L2), JAAP-004-R-01 - FORMER BURNING AREA (L34))

2009

SI (JAAP-001-R-02 - L2-L3 Extended Buffer)

Projected Phase Completion Milestones

See attached schedule

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates

Site ID	Site Name	ROD/DD Title	ROD/DD Date
JAAP-001-R-02	L2-L3 Extended Buffer	Expanded Buffer Area DD	20160915
JAAP-001-R-03	Capped L3 Area	DD for JAAP-001-R-03	20140915
JAAP-004-R-01	FORMER BURNING AREA (L34)	DD for 001R01, 002R01, and 004R01	20160115
JAAP-001-R-01	DEMOLITION AREA (L3)	DD for 001R01, 002R01, and 004R01	20160115
JAAP-002-R-01	EXPLOSIVE BURNING GROUND 1	DD for 001R01, 002R01, and 004R01	20160115

(L2)

Final RA(C) Completion Date: 201903

Schedule for Next Five-Year Review: 2014

Estimated Completion Date of MMRP at Installation (including LTM phase): 204309

JOLIET AAP MMRP Schedule

						= phas	e underwa	ay
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-001-R-01	DEMOLITION AREA (L3)	LTM						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-001-R-02	L2-L3 Extended Buffer	RI/FS						
		RD						
		RA(C)						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-001-R-03	Capped L3 Area	RI/FS						
		IRA						
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-002-R-01	EXPLOSIVE BURNING GROUND 1	LTM						
	(L2)							
SITE ID	SITE NAME	PHASE	FY14	FY15	FY16	FY17	FY18	FY19+
JAAP-004-R-01	FORMER BURNING AREA (L34)	LTM						

Community Involvement

Technical Review Committee (TRC): None

Community Involvement Plan (Date Published): 201102 Restoration Advisory Board (RAB): RAB established 1995

RAB Adjournment Date: RAB Adjournment Reason:

Additional Community Involvement Information

Community involvement was initiated with the TRC that began in July 1988, after the manufacturing area was placed on the NPL. The TRC was replaced with a RAB that began in December 1995 and met monthly until June 1999. The RAB then met bimonthly through September 2007.

The mission of the RAB is to:

- represent the community by facilitating communications and coordination between the community and the appropriate government agencies in the environmental cleanup of the JOAAP;
- critically review and comment on pertinent environmental cleanup documents:
- make recommendations to the US Army and other appropriate governmental agencies regarding cleanup methods and priorities; and
- encourage public participation in accomplishing these goals.

Past meeting activities have included several installation tours, media coverage (radio, television, newspaper) an open house, special training events, and guest speakers. Individual RAB members participated in the first IAP workshop, Region V RAB forum, Defense Environmental Restoration Program (DERP) workshops, public speaking engagements, and radio and newspaper interviews.

Several RAB members participated in ecological and human health workgroups formed to finalize interim ROD issues.

A RAB meeting is called annually. An adjournment meeting will be held after the final land transfer. The last RAB meeting was September 2009. The next RAB meeting will occur in FY13.

Administrative Record is located at

Joliet Army Ammunition Plant Administrative Building 29401 South Route 53 Wilmington, IL 60481 (815)423-2870

Information Repository is located at

Joliet Army Ammunition Plant Administrative Building 29401 South Route 53 Wilmington, IL 60481 (815)423-2870

Current Technical Assistance for Public Participation (TAPP): N/A

TAPP Title: N/A
Potential TAPP: N/A